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| APPLICATION NO.                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/084,336                                | 02/28/2002  | Dieter Kerner        | 032301.606          | 5608             |
| 441                                       | 7590        | 12/30/2009           | EXAMINER            |                  |
| SMITH, GAMBRELL & RUSSELL                 |             |                      | ZIMMER, MARC S      |                  |
| 1130 CONNECTICUT AVENUE, N.W., SUITE 1130 |             |                      |                     |                  |
| WASHINGTON, DC 20036                      |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1796                |                  |
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|   |             |                      | 12/30/2009          | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/084,336             | KERNER ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | MARC S. ZIMMER         | 1796                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 November 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 7,8 and 13-18 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 7,8 and 13-18 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere does the Specification disclose doping the claimed oxides with potassium oxide. Rather, "potassium salts" ([0128] of the associated pre-grant publication) and potassium [0175] are mentioned as the dopants.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold et al., JP 2000-169132 in view of the teachings taken from Chapter 6 of the volume entitled *Handbook of Fillers, 2<sup>nd</sup> Edition* authored/edited by Wypych, Herzig, U.S. Patent # 4,101,499, Penneck, U.S. Patent # 4,001,128, and Cyprien Guy et al.,

U.S. Patent # 4,886,661 for the reasons established earlier. See, for instance, the Examiner's August 25, 2006 correspondence.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hemme et al., U.S. patent Application Publication No. 2002/0018741 in view of the teachings taken from Chapter 6 of the volume entitled *Handbook of Fillers, 2<sup>nd</sup> Edition* authored/edited by Wypych, Herzig, U.S. Patent # 4,101,499, Penneck, U.S. Patent # 4,001,128, and Cyprien Guy et al., U.S. Patent # 4,886,661 for the reasons established earlier.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over over Mangold et al., JP 2000-169132 in view of the teachings taken from Chapter 6 of the volume entitled *Handbook of Fillers, 2<sup>nd</sup> Edition* authored/edited by Wypych, Herzig, U.S. Patent # 4,101,499, Penneck, U.S. Patent # 4,001,128, and Cyprien Guy et al., U.S. Patent # 4,886,661 as applied to claims 13-16 above and also in view of Lentz, U.S. Patent # 3,122,520 for the reasons established earlier. Applicant is encouraged to review, in addition to the August 25, 2006 Office action, the December 12, 2006 correspondence and, in particular, the analysis of the patentability of claim 4 inasmuch as present claim 16 largely mirrors the subject matter of claim 4, now cancelled.

Claims 8 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold et al. (US Pat. 6,328,944) in view of the teachings taken from Chapter 6 of the volume entitled *Handbook of Fillers, 2<sup>nd</sup> Edition* authored/edited by Wypych,

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Herzig, U.S. Patent # 4,101,499, Penneck, U.S. Patent # 4,001,128, and Cyprien Guy et al., U.S. Patent # 4,886,661.

Mangold et al. describes the preparation of doped, pyrogenically prepared metal/metalloid oxides of metals having BET surface areas of between 5 and 600 m<sup>2</sup>/g which are doped with one or more doping components of which potassium salts are exemplary (column 1, lines 30-41 and column 2, lines 57-58). Among the applications for which the doped, treated metal(loid) oxides are employed include as additives in the production of polymer compositions (column 3, lines 26-36). In this connection, Wypyech, Herzig, Penneck, and Cyprien Guy have been repeatedly cited during this prosecution as a small sampling of the disclosures advocating for the treatment of fillers with organosilicon compounds to enhance their compatibility with the polymer host.

Concerning claims 15 and 17, to the extent that the Mangold contemplates doping the oxide particles using an aerosol technique, which mirrors the technique espoused in the present Specification, the requirement that the dopant be uniformly distributed within the oxide will be inherently satisfied.

Concerning claims 16 and 18, the Examiner acknowledges that Mangold fails to describe the treatment of the oxide component with water but, of course, this is not unexpected given that Mangold also does not teach the modification of the oxide with an organosilicon compound. On the other hand, at least Herzig (abstract) teaches treating an oxide filler with water in concert with organosilicon modification and, although that disclosure describes co-treatment with water and an organosilicon

compound as opposed to first exposing the oxide to water and then to the organosilicon compound, the skilled artisan understands the role of the water and would, likewise, appreciate that water treatment could precede organosilicon compound treatment *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results)

### ***Response to Arguments***

With all due respect, Applicants' arguments remain much the same as they have been throughout the lengthy prosecution of this application. The Examiner has already gone to great lengths to rationalize why he continues to regard the claimed invention as unpatentable, all of the objections by Applicant notwithstanding. For this reason, there will be no attempt herein to further address Applicants' points. If Applicant believes that the Examiner has offered an opinion that is inconsistent with the best practices and procedures of the U.S. Patent Office, they are invited to appeal their case to the Board of Patent Appeals and Interferences.

Concerning new claims 17 and 18, it has been necessary to introduce a new foundation for rejection because Mangold et al., JP 2000-169132 does not contemplate doping an oxide filler with potassium.

Deller et al., U.S. 5,776,240 was cited in a continuation application of this application and is noteworthy to the extent that it describes treating oxide particles with

precisely the same organosilicon compounds delineated in instant claim 15. Also, it should be emphasized that column 6 of this disclosure indicates that the organosilicon treatment serves to reduce the surface silanol content of oxide filler which, as the Examiner has explained repeatedly, enhances the compatibility of the filler with a polymer host and, in turn, renders the oxide filler less susceptible to aggregation in the polymer host that leads to a substantial reduction in a host of different properties.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC S. ZIMMER whose telephone number is (571)272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 23, 2009

/Marc S. Zimmer/  
Primary Examiner, Art Unit 1796